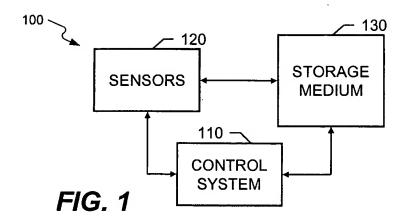
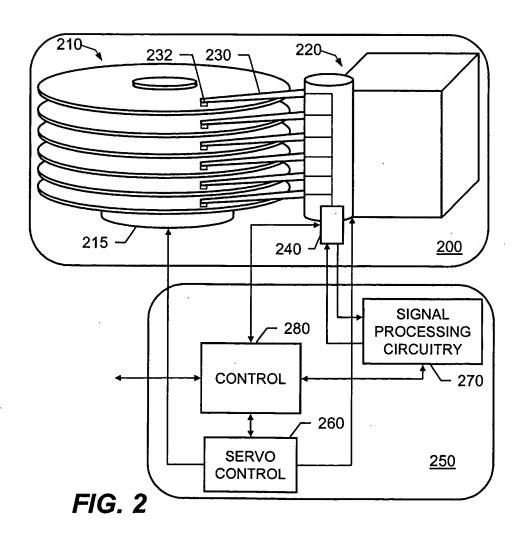
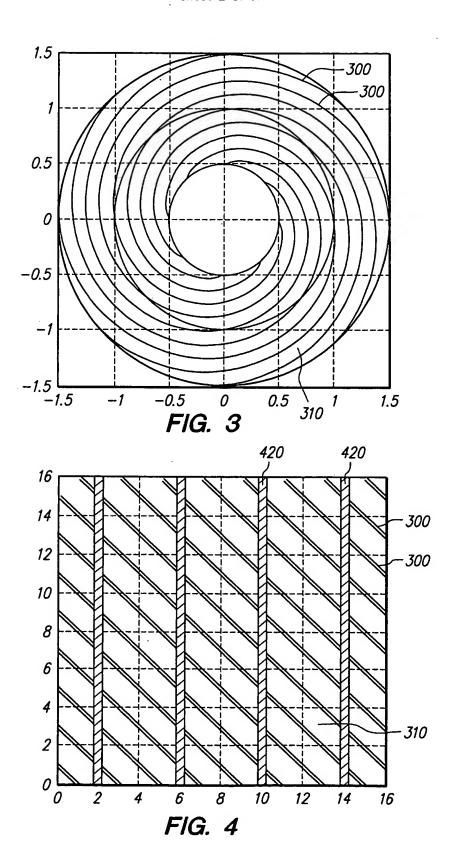
Matter No.: 13361-075001/MP0416, Applicant(s): K. Han et al.
DISK SERVO PATTERN WRITING
Sheet 1 of 11

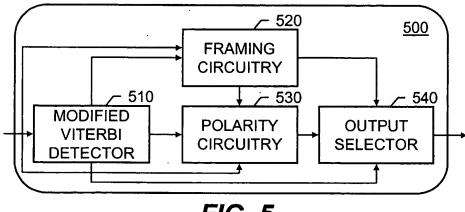




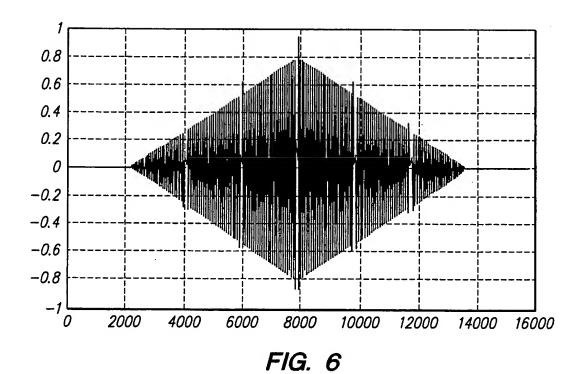
Sheet 2 of 11



Matter No.: 13361-075001/MP0416, Applicant(s): K. Han et al.
DISK SERVO PATTERN WRITING
Sheet 3 of 11







Matter No.: 13361-075001/MP0416, Applicant(s): K. Han et al.
DISK SERVO PATTERN WRITING
Sheet 4 of 11

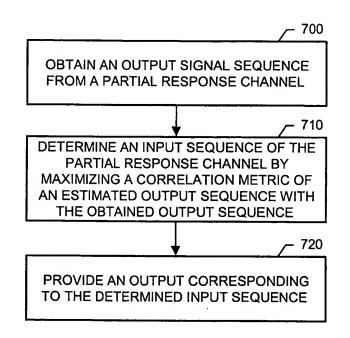


FIG. 7

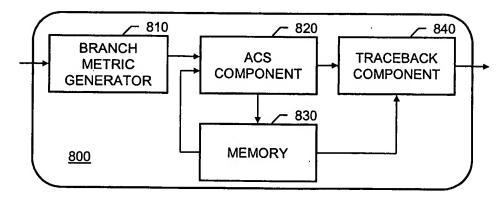


FIG. 8

Matter No.: 13361-075001/MP0416, Applicant(s): K. Han et al.
DISK SERVO PATTERN WRITING
Sheet 5 of 11

900 FIG. 9

					for Each Symbol
Previous Symbol	Current Symbol	State Transitions	1 1	Peak	Shoulder sampling
"0"(1100)	"0"(1100)	1100->1100			1,1,-1,-1
"0"(1100)	"1"(0011)	1100->0011	X0-0 00+0	0,0,1,0	0,0,1,1
		0011->1100	X0+0 00-0	0,0,-1,0	0,0,-1,-1
"1"(0011)	"1"(0011)	0011->0011	X0+0 -0+0	-1,0,1,0	-1,-1,1,1



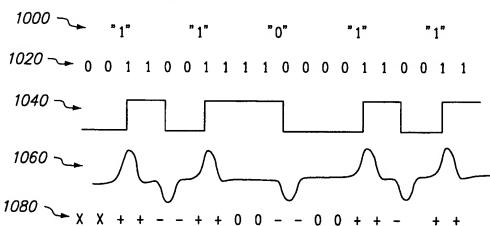
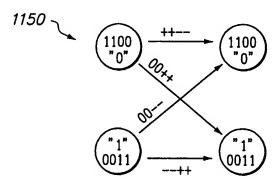


FIG. 11



Matter No.: 13361-075001/MP0416, Applicant(s): K. Han et al.
DISK SERVO PATTERN WRITING
Sheet 6 of 9

1200

FIG. 12

Phase 0		PI	nase 1	Pł	nase 2	Phase 3		
output	accumulator	r output accumulator		output	accumulator	output	accumulator	
0	672	1	1036	1	2074	1	1215	
0	672	1	1036	1	2074	0	1215	
0	672	0	1036	1	2074	1	1215	
0	672	1	1036	1	2074	0	1215	
0	672	1	1036	1	2074	0	1216	
0	672	1	1036	1	2075	0	1216	
1	672	1	1037	1	2076	1	1216	
1	673	0	1037	0	2076	0	1216	
0	673	. 1	1037	1	2076	0	1216	
0	673	1	1037	1	2076	0	1216	
0	673	1	1037	1	2076	0	1216	
0	673	1	1037	1	2076	0	1216	
0	673	1	1037	1	2076	1	1216	
0	673	0	1037	1	2077	1	1217	
0	673	0	1037	1_	2078	1	1217	
0	673	0	1037	0	2078	0	1218	
0	673	1	1037	1	2078	1	1218	
0	673	1	1037	1	2078	0	1218	
0	673	1	1037	1	2078	0	1218	
0	673	1	1037	1	2078	1	1218	
0	673	0	1037	11	2078	1	1218	
1	674	0	1037	1	2079	1	1218	
1	674	0	1038	1	2080	1	1218	
0	675	0	1038	0	2080	0	1218	
0	675	1	1038	1	2080	0	1218	
0	675	0	1038	1	2080	1	1218	
0	675	0	1038	1	2080	0	1218	
0	675	1	1038	1	2080	0	1218	
0	675	_1_	1038	1	2080	0	1219	
1	675	_1	1039	1	2081	0	1219	
1	675	1	1039		2082	1	1219	
0	676	0	1039	0	2082	0	1219	
0	676	1	1039	1	2082	0	1219	
0	676	1	1039	1	2082	0	1219	
0	676	1	1039	1	2082	1	1219	
0	676	1	1039	1	2082	0	1219	
0	676	1	1039	1	2082	1	1219	
0	676	0	1039	1	2083	1	1219	
0	676	0	1040	1	2085	1	1219	

Matter No.: 13361-075001/MP0416, Applicant(s): K. Han et al.
DISK SERVO PATTERN WRITING
Sheet 7 of 11

1300

FIG. 13

DI.	Dhace O Dhace 1 Dhace 2									
Phase 0			nase 1		nase 2	Phase 3				
output		output	accumulator	output accumulator o		output	accumulator			
11	672	0	1036	0	2074	0	1215			
1	672	0	1036	0	2074	1	1215			
1	672	1	1036	0	2074	0	1251			
11	672	0	1036	0	2074	1	1251			
1	672	0	1036	0	2074	1	1216			
11	672	0	1036	0	2075	1	1216			
1	672	0	1037	0	2076	0	1216			
0	673	1	1037	1	2076	1	1216			
0	673	0	1037	0	2076	1	1216			
1	673	0	1037	0	2076	1	1216			
1	673	0	1037	0	2076	1	1216			
1	673	0	1037	0	2076	1	1216			
1	673	0	1037	0	2076	0	1216			
1	673	1	1037	0	2077	0	1217			
1	673	1	1037	0	2078	0	1217			
1	673	1	1037	1	2078	1	1218			
1	673	Ō	1037	0	2078	0	1218			
1	673	0	1037	0	2078	1	1218			
1	673	0	1037	0	2078	1	1218			
1	673	0	1037	0	2078	0	1218			
1	673	1	1037	0	2078	0	1218			
1	674	1	1037	0	2079	0	1218			
1	674	1	1038	0	2080	0	1218			
0	675	1	1038	1	2080	1	1218			
0	675	0	1038	0	2080	1	1218			
1	675	1	1038	0	2080	0	1218			
1	675	1	1038	0	2080	1	1218			
1	675	0	1038	0	2080	1	1218			
1	675	0	1038	0	2080	1	1219			
1	675	0	1039	0	2081	1	1219			
1	675	0	1039	0	2082	0	1219			
0	676	1	1039	1	2082	1	1219			
0	676	0	1039	0	2082	1	1219			
1	676	0	1039	0	2082	1	1219			
1	676	0	1039	0	2082	0	1219			
1	676	0	1039	0	2082	11	1219			
1	676	0	1039	0	2082	0	1219			
1	676	1	1039	0	2083	0	1219			
1	676	1	1040	0	2085	0	1219			
1	676	1	1040	1	2085	1	1219			

Matter No.: 13361-075001/MP0416, Applicant(s): K. Han et al.
DISK SERVO PATTERN WRITING
Sheet 8 of 11.

1400 \

FIG. 14-1

	64 sampling	phases	that	cover	a	complete	symbol	duration	with	16x	over-	-samol	ina
1					_								
2													
3													_
4							_						
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6	-						_						
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15									:				
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22	 												
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24				-		X							-
25								-					XX.
26 27	xxx												
28										•		X	XX
29	xxxx					xxx	××××						
30	xx						××	-				хх	_
31	^^					^^^^	^^^^_					~~	—
32						^^^^	^^^ 					^^_	
33				· · · · ·		XXXXX	~^^^_			-	· · ·	V V	
34	x					XXXXXX	XXXXXX					-^ ^	
35						XXXXXXX	XXXXX					Y	
36													
37	x												
38													xx
39	xxxx												
40	_xxxxxxx		x	XXXX	KX:	XXXXXXX	xxxxx	XXXXXXX	x			·	
41						XXXXXXX	xxxxx						
42	x_		X	XXXX	(X	XXXXXXX	xxxxx	XXXXXXX	x	_			
43					_X	XXXXXXX	xxxxx	x					

Matter No.: 13361-075001/MP0416, Applicant(s): K. Han et al.
DISK SERVO PATTERN WRITING
Sheet 9 of 11

FIG. 14-2

44	
	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
45	xxxxxxxxxxxxx
46	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
47	xxxxxxxxxxxxx
48	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
49	xxxxxxxxxxxxx
50	xx_xxxxxxxxxxxxxxxxxxxxxxxxxxxx
51	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
52	x_xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
53	xxxxxxxxxxxxxxx
54	xx_xxxxxxxxxxxxxxxxxxxxxxxxxxxx
55	xxxxxxxxxxxxxxxxx
56	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
57	XXXXXXXXXXXXXXXXX
58	xx_xxxxxxxxxxxxxxxxxxxxxxxxxxxx
59	xxxxxxxxxxxxxxxxxx
60	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
61	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
62	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
63	xxxxxxxxxxxxxxxxx
64	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
65	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
66	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
67	xxxxxxxxxxxxxxxxxxx
68	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
69	XXX
70	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
71	xxxxxxxxxxxxxxxxxx
72	xxxxx_xxxxxxxxxxxxxxxxxxxxxxxxxx

Matter No.: 13361-075001/MP0416, Applicant(s): K. Han et al.
DISK SERVO PATTERN WRITING
Sheet 10 of 11

1500 \

FIG. 15-1

I	64 sampling phases that cover a complete symbol duration with 16x over-samplin
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l	
l	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
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1	

Matter No.: 13361-075001/MP0416, Applicant(s): K. Han et al.
DISK SERVO PATTERN WRITING
Sheet 11 of 11

FIG. 15-2

44	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
45	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
46	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
47	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
48	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
49	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
50	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
51	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
52	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
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58	xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
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62	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
63	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
64	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
65	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
66	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
67	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
68	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
69	XXX
70	**************************************